Eisen," 1905, p. 1484, Charge 8,996 of IGth September, 1904, which is, therefore, quoted here also (for analysis see p. 171). 26,200 kilogrammes molten pig iron was used, which was poured on to 2,800 kilogrammes, or 8*5 per cent., of limestone, and 5,720, or 21'8 per cent., of ore 99 per cent. Fe203. Afterwards 880 kilogrammes and 180 kilogrammes ore were added, i.e., 1'94 per cent. ore. For deoxidation, 200 kilogrammes=0'76 per cent, of 80 per cent, ferro-manganese was used.

In order to make the course of the process more perceptible the numerous figures of the analyses made are set out in Figs. 21 and 22, of which the first illustrates the elimination of the reducing agents in the manner usually customary, whilst the second renders apparent the work of the oxygen. The figurative values for the latter have been calculated in the manner previously given. The total oxygen consumption of this heat is again estimated on the variation of the composition of the metal, and of the oxygen combined with iron. The quantity of the final slag was ascertained on the basis of of the amount of silica which had been active. For the foregoing example, it had been found that 1*2 kilogramme SiOa per minute was added to the bath from the furnace structure,

thus in 200 minutes 260 x 1/2 == 312 kilogrammes = V-'fmM

= 1'19 per cent, on the weight of the metal charged. In the first slag.there was therefore:—

1. Originating from tlio furmico structuro . . 1 "19 per cent.
2. Prom 1*03 per cent. Six2-14, producing . . 2'2() ,, tf. ,,
8'5 ,, limestone, at lM>5 per cout. <H4 ,, 4. ,, 2tt*8
,, ore, at 1 per cent. . . 0*24 ,, o. ,, 20
kilogrammes Hand ..... (H).s ,,
Total . . . iWM>7

From this as well, the content of SiOa in the final slag amounting to 20*92, one ascertains the weight of the latter an

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== 18*40 per cent. The slag contained 9*98 per cent. Ee,

and 0*29 0 is combined with 1 per cent. Fe, thus the content of oxygen in combination with iron, in the final slag is 18*40 x 0-0993 X 0-29 = 0*58 per cent.

The amount of oxygen employed in changing the corn-B.S.

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